

# Han Economy & Technology

## Economy

•The economic activity that most people engaged in was still agriculture. The vast majority of the population were small farmers, and new innovations like the iron plow, horse harness, or the wheelbarrow were helpful in increasing yields.

•The economic activity that enriched the Han Dynasty was trade along the Silk Roads. Extensive trade ran from China through to the Middle East, and ultimately to Rome. As a result of the lucrative (profitable) nature of trade, the Han government sought to protect the western trade routes that ran around the Taklamakan desert by extending the Great Wall 2700 miles.



•Because Chinese silk was so highly desired by other empires, the Han government tightly regulated the silk industry and went to great lengths to protect the secret of silk making. Silk was literally worth its weight in gold! The penalty was *death* to any who told the secret of silk making, or who smuggled silk worms out of the country!

•The Han government also controlled the most important industries inside of China. These industries included the mining of salt, the production of iron, and the brewing of alcohol. Iron was used to make all tools, especially farming tools, salt was an important preservative, and alcohol was, alcohol!

•The government also minted coins in order to facilitate trade and the growth of the economy. This was another example of how the Han



## Technology

•The Han era was one of significant technological innovation.

•Many of the inventions were geared to facilitate agricultural production. One of the important inventions was the development of the *iron plow*. With this, the Chinese were able to cultivate difficult land, and do so more rapidly.

•Two other important inventions were the *wheelbarrow*, and the *horse harness*. The wheelbarrow allowed peasants to carry heavy loads without the use of animals. The horse harness was more comfortable for horses, and allowed them to pull heavier loads.



•One of the most important inventions was the use of *hydraulic power*. The water wheel was used to turn gears and pound grain. The wheel was also used to power the bellows which stoked the fires that heated the iron. It also blew oxygen through the iron to create purer iron (oxygen blew the impurities off to the side). This was used in all manner of tools (including the plow).

•An important military invention was the creation of the repeating cross-bow with automatic reload.

•But possibly the most important invention, historically speaking, was the creation of paper. Wood fibers, hemp waste and old rags were soaked in a water bath until a pulp was created. Screens were dragged through the pulp until fibers attached to them. The screens were then pressed to remove excess water, and dried. The resulting dried pulp was used as a writing surface. This paper was cheap and easy to make, and helped to raise literacy rates in China.

